

REMARKS

The enclosed is responsive to the Examiner's Office Action mailed on April 26, 2010. By way of the present response applicants have: 1) amended no claims; 2) added no claims; and 3) canceled no claims. No new matter has been added. Reconsideration of this application as amended is respectfully requested.

35 U.S.C. §112 Rejections

Claim 1 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite. In particular, the Examiner claims that it is unclear if the first ohmic layer is both comprised of multiple metal layers and a mirror at the same time, such that the mirror is at the junction between the first surface of the multiple epitaxial layers and the first ohmic contact layer. Applicants respectfully disagree that the claim is unclear. In the interest of furthering prosecution, however, applicants have amended claim one to clarify that the first ohmic layer is comprised of multiple metal layers and that the first ohmic layer is a mirror at the junction between the first surface of the multiple epitaxial layers and the first ohmic contact layer.

Accordingly, applicants respectfully submit that the rejection of claim 1 has been overcome.

Claim Rejections – 35 U.S.C. §102

Claims 1-3, 9, 11-13, 15, 18, 19, 21, 23-26, and 28 stand rejected under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 6,492,661 by Chien et al., (hereinafter "Chien"). Applicants note that the Examiner cited Chien as art under 35 U.S.C. §102(e). Chien, however, was patented prior to the priority date of the

present application (less than one year prior) and, therefore falls under 35 U.S.C. §102(a). Applicants do not admit that Chien is prior art and reserve the right to swear behind Chien at a later date.

Applicants respectfully submit that Chien at least fails to disclose

forming a first ohmic contact layer on a first surface of the multiple epitaxial layers, the first surface being remote from the substrate, ***the first ohmic contact layer comprising multiple metal layers and the first ohmic contact layer being a mirror at a junction between the first surface of the multiple epitaxial layers and the first ohmic contact layer.***

(Claim 1) (emphasis added).

The Examiner alleges that the ohmic contact layer 124 of Chien is equivalent to the claimed first ohmic contact layer. Applicants respectfully disagree. The ohmic contact layer 124 of Chien, however, consists of a p-type InGaP layer and a p-type GaAs layer. (Chien, col. 5 lines 42-44). This is different from the first ohmic contact layer of the claimed invention, which comprises “multiple metal layers.” Chien does not disclose that the ohmic contact layer 124 is comprised of multiple metal layers as claimed.

Furthermore, the Examiner alleges that the reflection layer 125 is equivalent to the claimed mirror. Applicants respectfully disagree. The ohmic contact layer 124 and the reflection layer 125 of Chien are two separate layers. This is different from claim 1, in which the mirror is actually the first ohmic contact layer itself.

Additionally, the reflection layer 125 is not formed at the junction between the first surface of the multiple epitaxial layers and the first ohmic contact layer as claimed. Instead, the mirror 125 of Chien is formed at the junction between the conductive substrate 126 and the ohmic contact layer 124 as shown in Figure 6d.

Although there is a small portion of the reflection layer 125 in contact with the upper cladding layer 123, this does not form an ohmic contact. As described in column 5 lines 57 to 67, Schottky contact is formed at the junction between the reflection layer 125 and the upper cladding layer 123, where the Schottky contact has poor conductivity and functions as a current-block region. Chien's reflective layer, therefore, is distinctly different from a mirror formed by the first ohmic contact layer, which is able to improve the current flow and provide light reflection at the same time.

Accordingly, applicants respectfully submit that the rejection of claims 1-3, 9, 11-13, 15, 18, 19, 21, 23-26, and 28 has been overcome.

Claim Rejections – 35 U.S.C. §103

Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chien. The Examiner alleges that a height in the range 15 to 500 micrometers, a thickness in the range 3 to 500 micrometers, and a spacing in the range of 200 to 2,000 microns would be obvious in light of Chien. In particular, the Examiner cites MPEP §2144.05 and *In re Woodruff*. Applicants respectfully disagree with the Examiner's assertion and interpretation of MPEP §2144.05 and *In re Woodruff*. The MPEP §2144.05 in its citation of *In re Woodruff* states "[i]n the case where the **claimed ranges 'overlap or lie inside ranges disclosed by the prior art'** a prima facie case of obviousness exists." (emphasis added). In contrast to the situation cited, Chien does not disclose a range and, therefore, there is no overlap of ranges between Chien and claim 5. Applicants respectfully submit that the Examiner's statement that applicants must show that the chosen dimensions are critical is not

correctly applied. A showing of the criticality of the claimed range is used to “rebut a prima facie case of obviousness **based on overlapping ranges.**” (MPEP §2144.05 III) (emphasis added).

Furthermore, claim 5 is dependent upon claim 1, and includes additional features. Accordingly, applicants submit that the rejection of claim 5 has been overcome for at least the reasons set forth above.

CONCLUSION

Applicants respectfully submit that in view of the amendments and arguments set forth herein, the applicable objections and rejections have been overcome. Applicants reserve all rights under the doctrine of equivalents.

Pursuant to 37 C.F.R. 1.136(a)(3), applicants hereby request and authorize the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 02-2666.

Respectfully submitted,

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